

**Portland Police Bureau
Training Division
Patrol Tactics**

Lesson Plan Outline and Presentation

Office (503) 823-0600

Class Room Hours: 1.0

Practical Hours: None

Written Exam: None

I. Course Title:

Shooting at Vehicles

II. Instructor:

Training Division Staff

III. Date/Time:

2009 In-Service

IV. Training Audience:

Sworn

V. Course Goal:

To better understand the implications involved when shooting at a vehicle and become more aware of the options available for officers to conduct an adequate threat assessment that can result in avoiding positions of danger which otherwise could possibly be avoided.

VI. Performance Objectives:

1. Discuss the existing policy on shooting at a moving vehicle 1010.10
2. Discuss how to conduct an adequate threat assessment pertaining to this particular subject
3. Learn how to recognize and avoid situations that may unnecessarily put officers in a position of danger relative to a moving vehicle
4. Become familiar with the safety zones that surround a vehicle and how to use them for tactical advantage
5. Learn about some of the tactical options available to officers when confronting a situation with a moving vehicle
6. Learn about the option of tactical disengagement and how to successfully implement that tactical plan
7. Learn about force consideration including
 - Environment
 - Ballistics
 - Vehicle Path

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VII. Course Outline

1. Introduction
2. PPB Policy 1010.10 Shooting at Moving Vehicles
 - a. Exceptions
3. Tactical Options



4. Safety Zones
5. Tactical Disengagement
6. If Force is Used
 - a. Environment
 - b. Ballistics
 - c. Vehicle Path
 - d. Hit Ratios
7. Summary



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1. Introduction

During the past decade, we have seen a dynamic shift in how the courts view law enforcement's use of force at moving vehicles. Police policies have changed as well as the type of tactics taught in how to deal with this dangerous situation.

The purpose of this presentation is to give officers some insight into this dangerous and controversial topic and to discuss what options officers have to keep themselves and others out of danger.

2. PPB 1010.10

The current policy of the Portland Police Bureau regarding the shooting at moving vehicle is:

Shooting At a Moving Vehicle (1010.10)

For the purposes of this policy, a moving vehicle itself shall not presumptively constitute a threat that justifies the member's use of deadly physical force. The member using deadly physical force must be able to clearly articulate the reason for the use of deadly physical force. Members shall not discharge a firearm at a person (s) in a moving vehicle unless one or both of the following criteria are met:

A. To counter an active threat of death or serious physical injury, by a person using means other than the vehicle:

B. There are no other means available at the time to avert or eliminate the threat

It is clear that the policy does not exclude a vehicle as a threat and action can be taken, but a good threat assessment and some common sense will allow officers the choice of several options if the criteria are not met for deadly force.

The first exception to this use of force refers to a person using some other means other than the vehicle itself to inflict death or serious physical injury. A firearm, explosive device, or some other type of weapon capable of causing death or serious physical injury may be used.

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The second exception is simply, if there are not any other options. The circumstances have become so extreme and exigent, that you have no other choice but to use force, which is justifiable under the circumstances.

3. Tactical Options

A. Threat Assessment

During a threat assessment, officers must quickly evaluate the situation, and then make a tactically sound plan or action to deal with the threat. Some of the questions you might ask yourself are:

- Am I winning the fight?
- Can I maintain Tactical Superiority?
- Am I compromising officer safety to an unreasonable degree?

When conducting a threat assessment remember everyone's perception of the threat are going to be different in varying degrees. You need to analyze the situations as you see them and to accordingly, with a plan or action. Consider your environment and your overall circumstances when conducting your assessment. Ask yourself the question, "can I win?", if not, then use another tactical plan.

B. Avoiding Situations

Many times, it is not that we did not have time to react, but rather we did not begin to react in time. Having an overall situational awareness will assist us in recognizing danger earlier, allowing more time to formulate a plan to avoid the situation.

Proper training and planning are key in our response to critical situations. We always need to be thinking about avenues of escape and the location of cover and concealment. By combining these elements, we can improve our ability to recognize and react sooner and avoid putting ourselves in a dangerous situation.

Officers need to be cautious about creating their own set of exigent circumstances through bad decision making and the use of poor tactics.

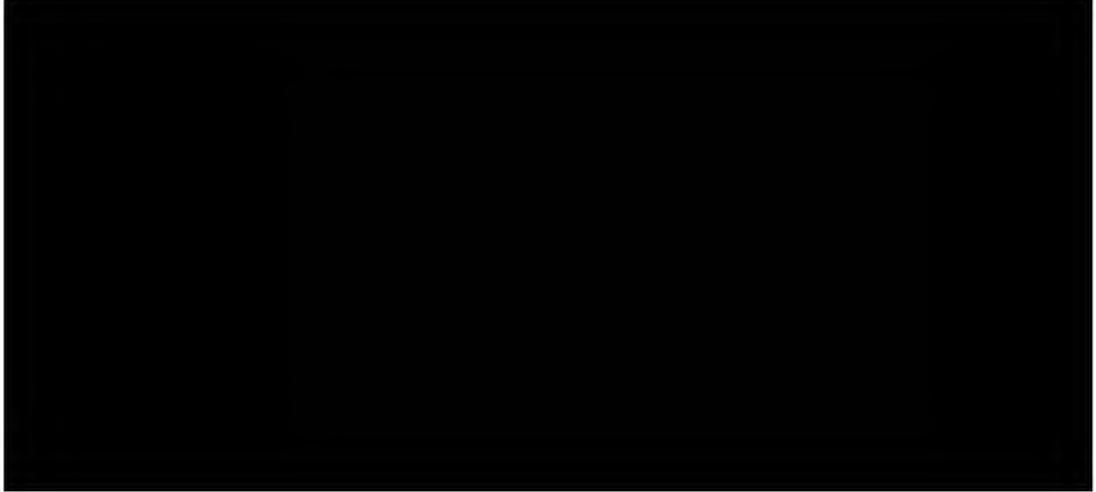
Officers should always be thinking about moving when confronting a situation involving a vehicle. Moving is a simple and effective tactic that can create distance, time and allow for an escape.

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C. Positioning



D. Driver's Side Approach

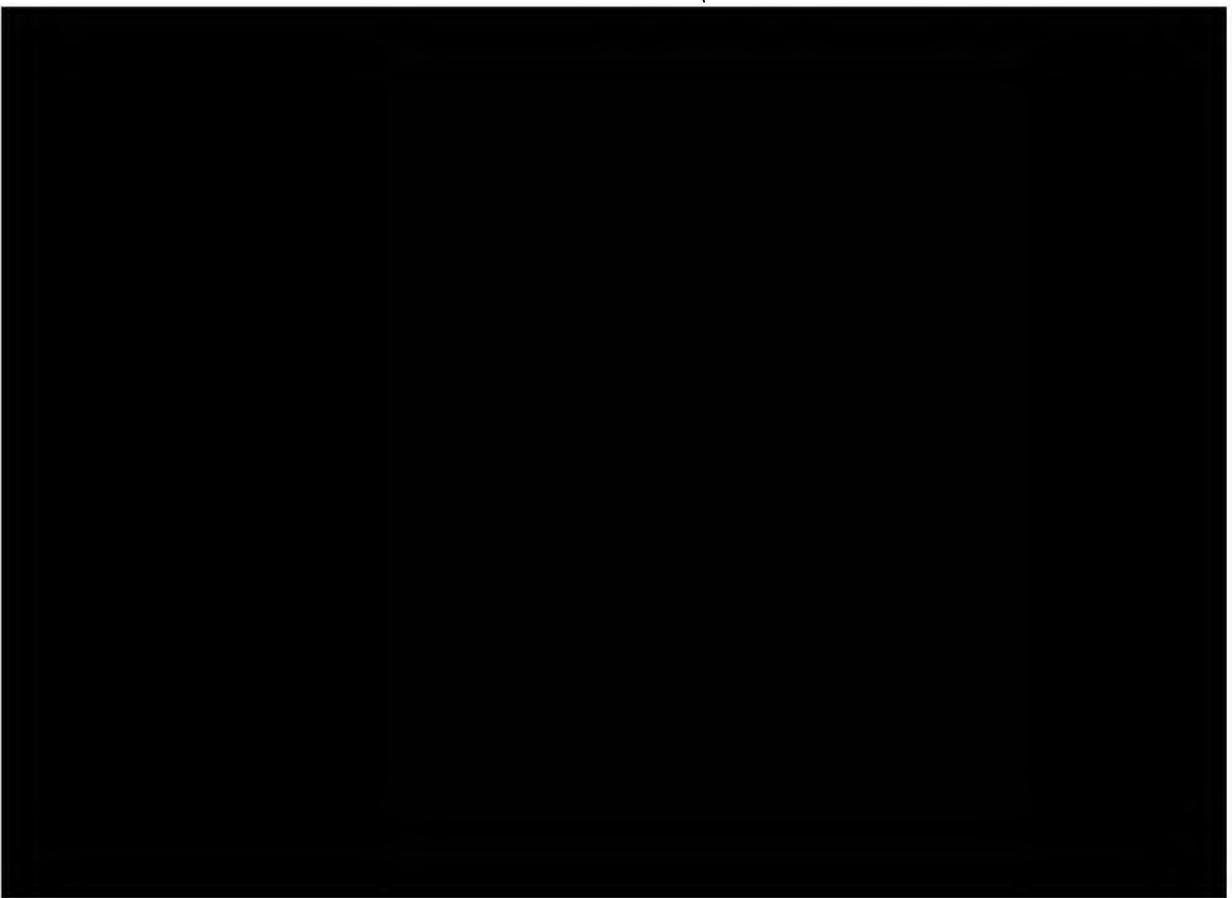


E. Passenger Side Approach



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4. Safety Zones



5. Tactical Disengagement



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6. Use of Force

A. Environment

If the need to use deadly force arises during a vehicle contact, officers need to be aware of their environment before using that force. Officers must be aware of the presence of bystanders. Crowded sidewalks and streets create a dangerous obstacle for an officer. Situational awareness is critical. Isolating your target is difficult enough, but coupled with environmental obstacles creates a difficult and dangerous situation.

One of the cardinal safety rules of firearms is, be aware of your target, your backstop, and what is beyond. Regardless of how exigent your circumstances might be, you are accountable for every shot you fire.

It is critical if you use deadly force in a vehicle situation you must continue to move and put distance between you and the threat. Moving will allow you to seek cover quickly, scan the environment for other tactical options and will keep the threat adjusting as well. Distance gives us time and time will give you options to work your way out of a dangerous situation.

In any situation, static or critical, be aware of where are your fellow officers. Awareness of their position will aid you should you have to use your firearm. If officers should have to fire, knowing where they are will assist you in getting to cover more effectively.

B. Ballistics

Understanding the ballistics of the ammunition you use is very important. This knowledge will assist you in your threat assessment pertaining to whether or not you will shoot.

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Before firing into a windshield, officers need to understand the dynamics involved pertaining to fragmentation, shattering glass and trajectory changes that may occur.

The presence of passengers in the vehicle is a major concern. The position of a passenger relative to the driver is critical for officers to consider before firing. Taking into consideration the circumstance already mentioned, the presence of a passenger in a vehicle may change the decision to fire and cause the officer to seek out an alternative tactical plan.

Movement is a tactical consideration as well. Successfully hitting a moving target presents a difficultly for the shooter. To complicate matters even more, the shooter should be moving as well. Having an awareness of your overall environment is a critical factor when both target and shooter are constantly changing positions. A change of position means a change in backstop. What was not there seconds ago, may now in the line of fire.

Ricochet rounds are a concern as well. The dynamics involved with the movement of a vehicle increase the likelihood of a rounds ricocheting. remembering the 4th Cardinal Safety Rule should help officers to make a sound tactical decision before discharging their weapon at a moving vehicle.

C. Vehicle Path

Part of an officer threat assessment is to consider the following question:

“If I incapacitate the driver, what will happen with the vehicle?”

Vehicle path is a real danger confronting officers who use force and eliminate the driver's ability to control the vehicle. This should be part of the officer's overall threat assessment of their situation.

According to the research of Dr. Martin Fackler, a well-known and published researcher on wound ballistics, absent a shot that disables the central nervous system, an individual can live for up to 10 seconds before they become completely incapacitated.

How much damage can a wounded driver inflict with a vehicle in 10 seconds? Officers need to consider this question before deciding to shoot at the driver of a moving vehicle.

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D. Hit Ratios

Standing on the range, static, with a non-moving target is a rich environment for marksmanship quality shooting. Add the elements of adrenaline, movement, potential bystander victims, and the overall stress of the decision making process to shoot at another human being, your ability to hit a target is affected.

For years it was believed that the national hit ratio for officer involved shooting was estimated to be 17% - 20%. Recent studies have indicated lighting conditions factor heavily with an officer's hit ratio. Estimates are 77% of police shootings occur in low-light conditions, these conditions dramatically change the statistical data.

Multiple officers shooting will also affect the hit ratios. Data received by the L.A. County Sheriff's Department revealed the following:

When only one officer fired during an encounter, the average hit ratio was 51%. When an additional officer was involved, hits dropped dramatically to 23%. With two or more officers shooting, the average hit ratio was only 9%.

Multiple officers shooting usually involves a suspect armed with a shoulder fired weapon, which increased the typical stand off distance for the officers.

A number of factors contribute to the statistical information on hit ratios. Those factors, coupled with a moving officer and a moving vehicle, will certainly have an influence on the officer's ability to hit their target.

7. Summary

The cornerstone of use of force training should be threat assessment. When conducted properly, a threat assessment will aid officers in their decision-making, planning and execution of their plans.

- Each critical situation has its own unique set of circumstances and proper preparation and planning should allow officers to make decisions that are tactically sound but still incorporate safety as a necessary part of the planning.

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* During the week of February 16th, some photos were added to the Powerpoint presentation of the ricochet rounds. Supporting documentation is in the research file for in-service 2009. Some additional information was added to the lesson plan. This information has been italicized on page #8.

Shooting at Vehicles

- Portland Police Bureau
- Training Division
- In-Service 2009



10-10-10

■ Shooting At A Moving Vehicle (10-10-10)

- For the purposes of this policy, a moving vehicle itself shall not presumptively constitute a threat that justifies the member's use of deadly physical force. The member using deadly physical force must be able to clearly articulate the reason for the use of deadly physical force. Members shall not discharge a firearm at a person(s) in a moving vehicle unless one or both of the following criteria are met:

1010.10

EXCEPTIONS:

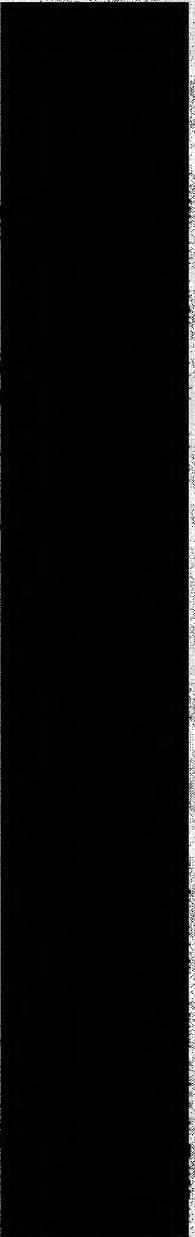
- A. To counter an active threat of death or serious physical injury, by a person using means other than the vehicle.

0-101

Exceptions:

- B. There are no other means available at the moment to avert or eliminate the threat.

Tactical Options



Threat Assessment

ASK YOURSELF THE FOLLOWING QUESTIONS:

Am I winning the fight?

Can I maintain tactical superiority?

Am I compromising Officer Safety to an unreasonable degree?

Threat Assessment

Remember

Everyone's perception of the threat will be different

- Perception is based on training, personal experience and perspective

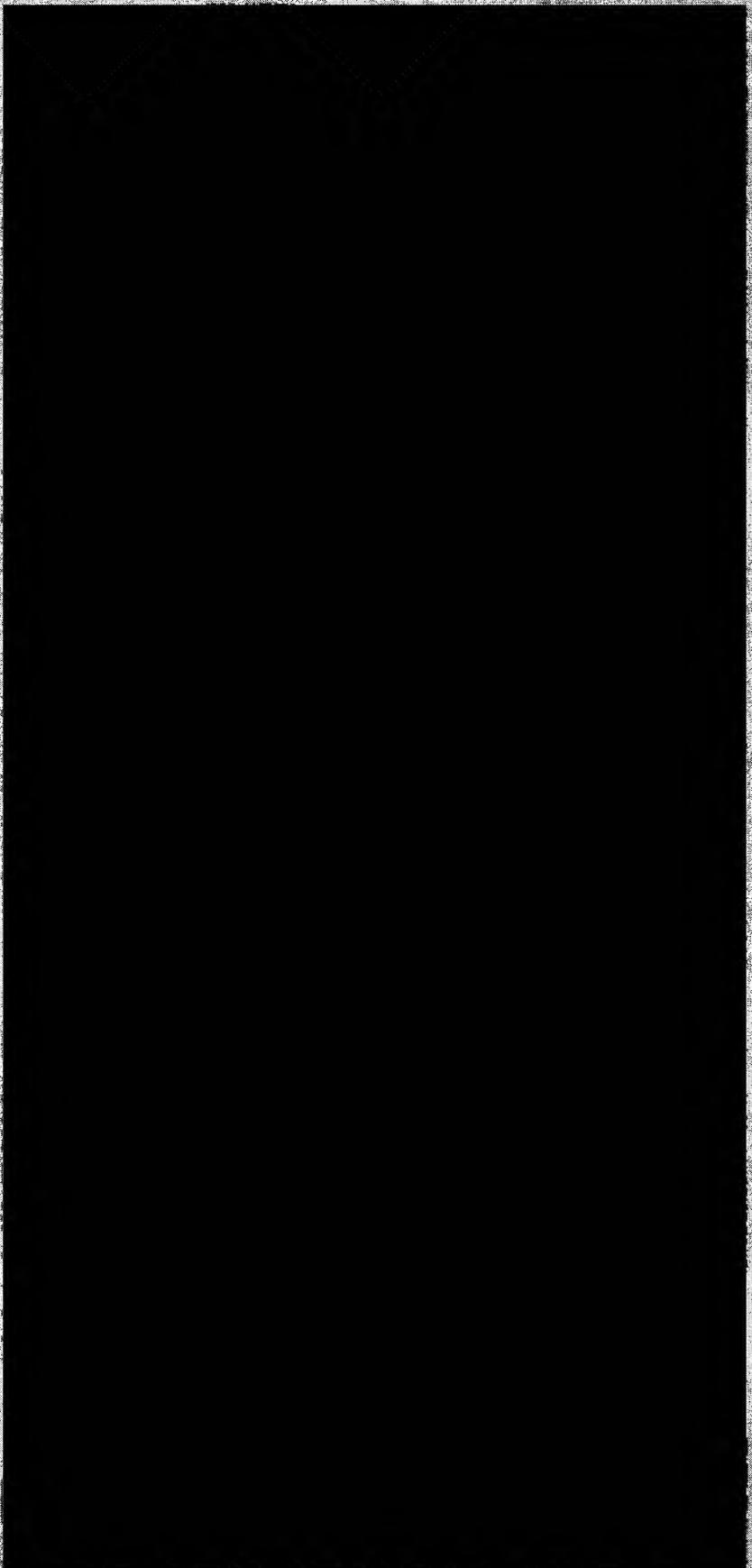
Avoiding Situations

- ❑ Many times it is not that we did not have time to "React" it is that we did not begin to react in time!
- ❑ Proper training and planning are key in our response to critical situations
- ❑ We can improve our ability to recognize and react sooner and avoid putting ourselves in a dangerous situation

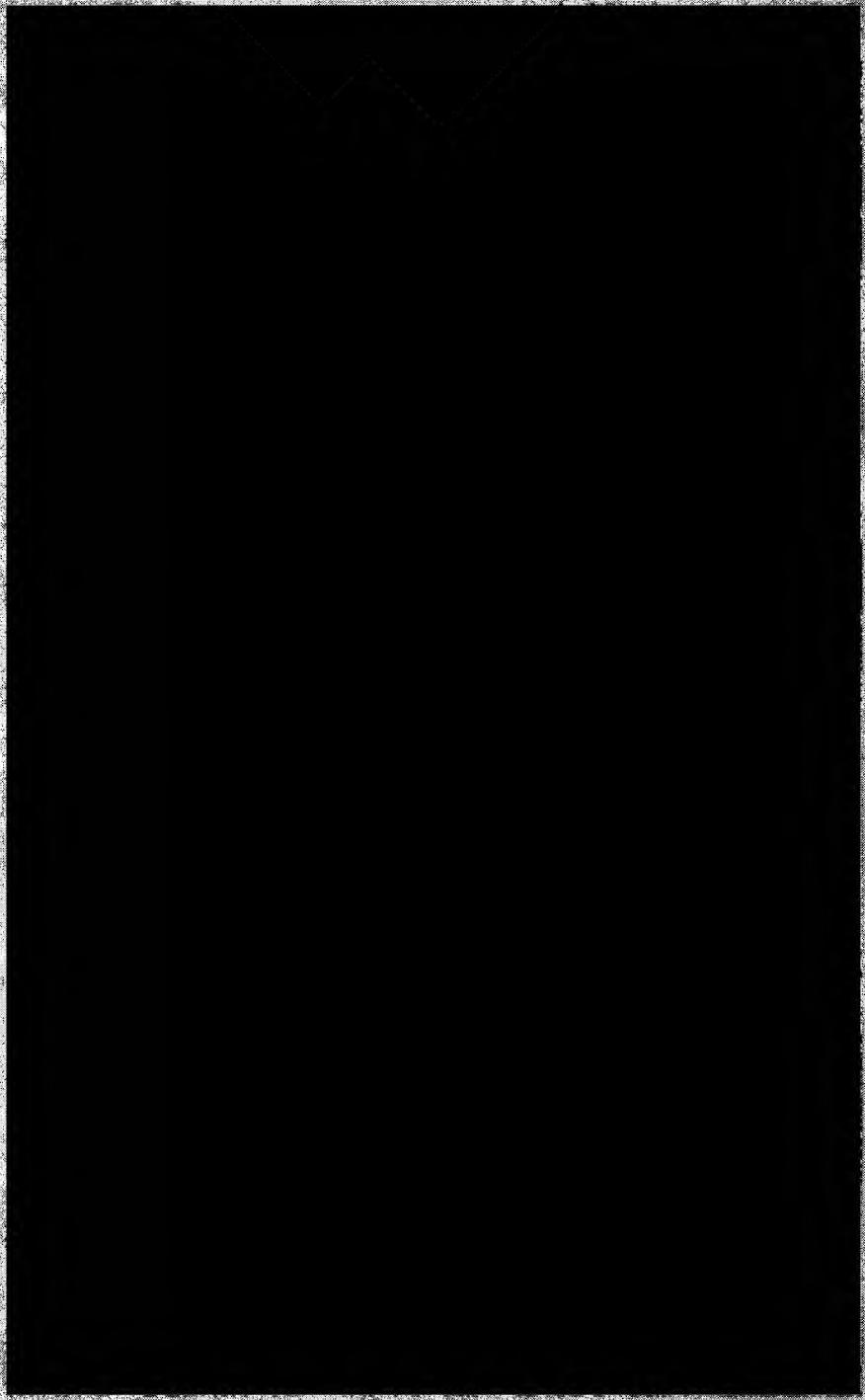
POSITIONING

- Proper positioning when approaching a vehicle will increase our safety and will aid in our ability to move away from danger
- We must learn how to position for maximum protection and provide avenues of escape

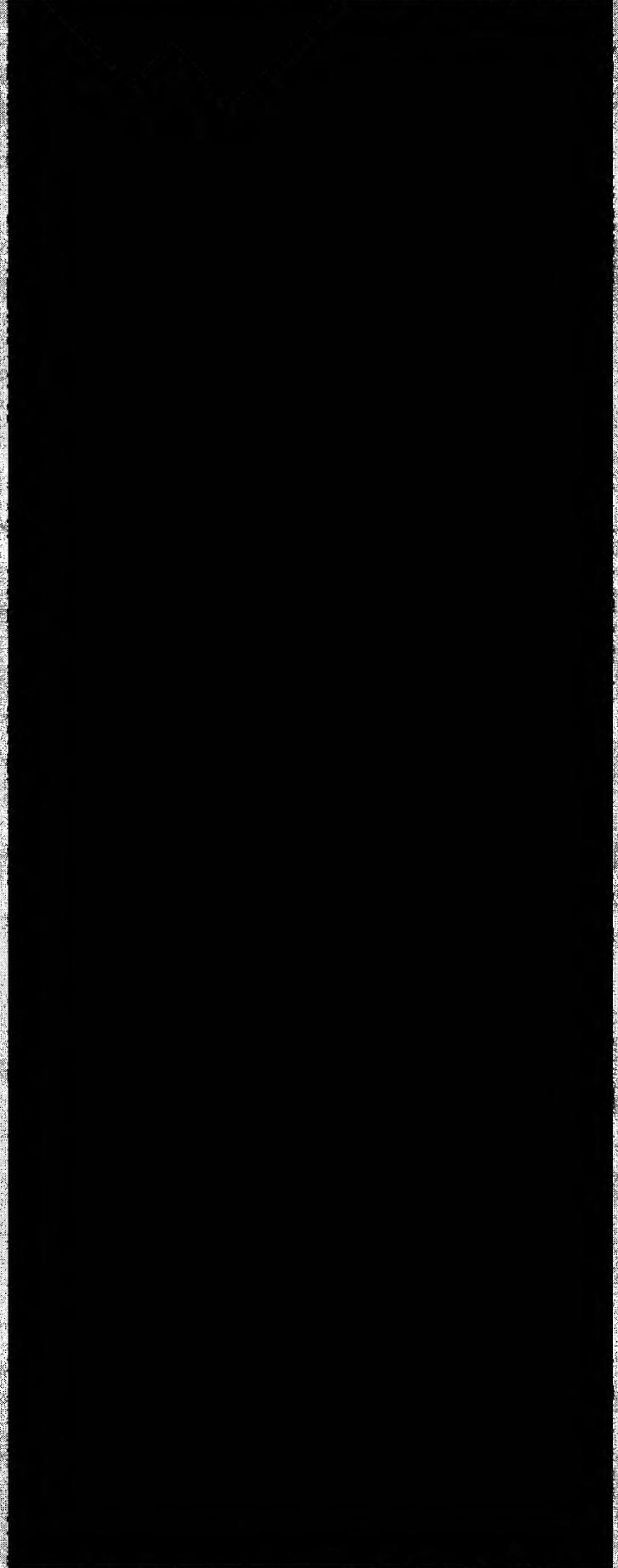
Driver's Side Positioning



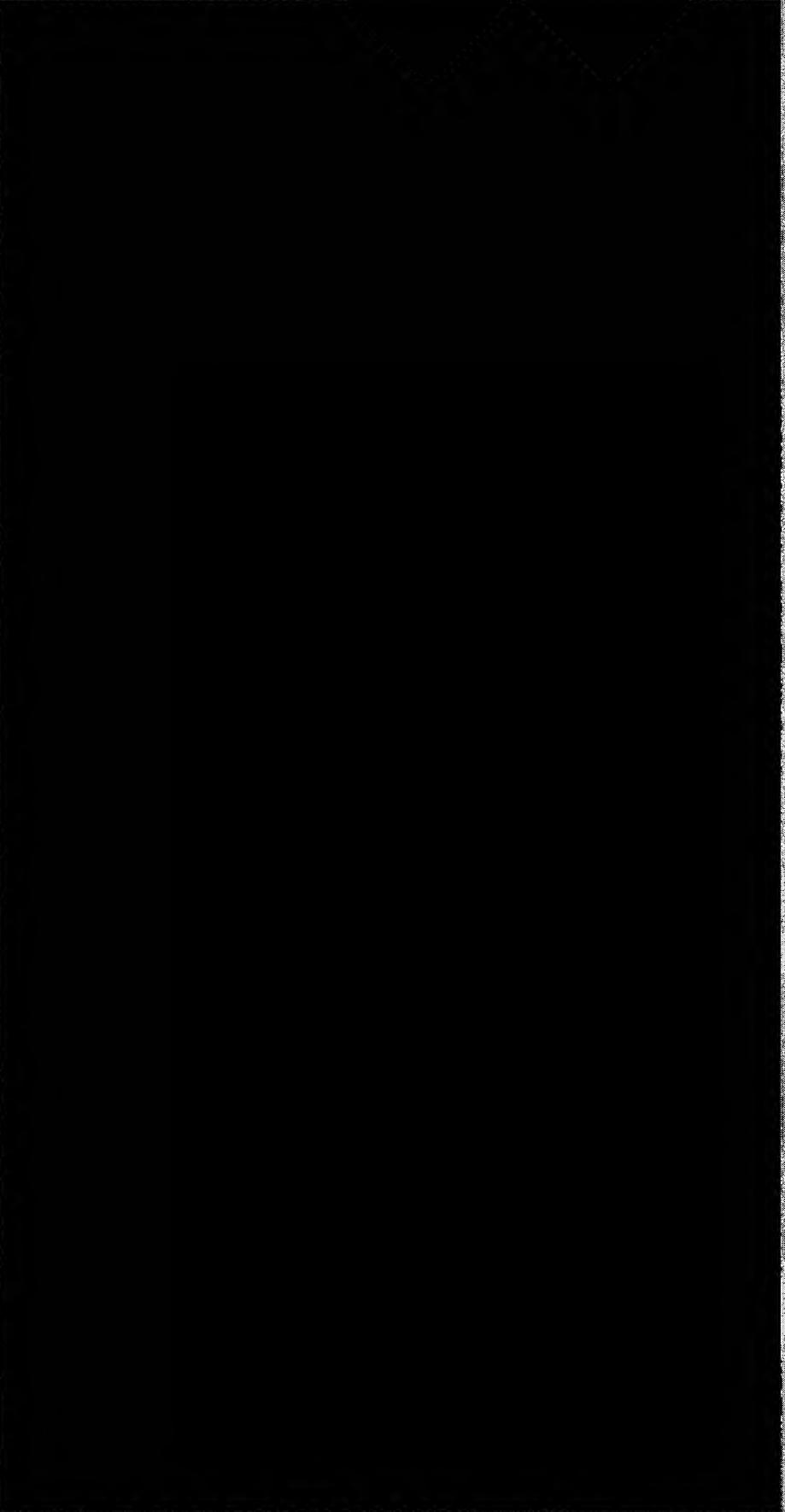
Driver's Side Tendencies



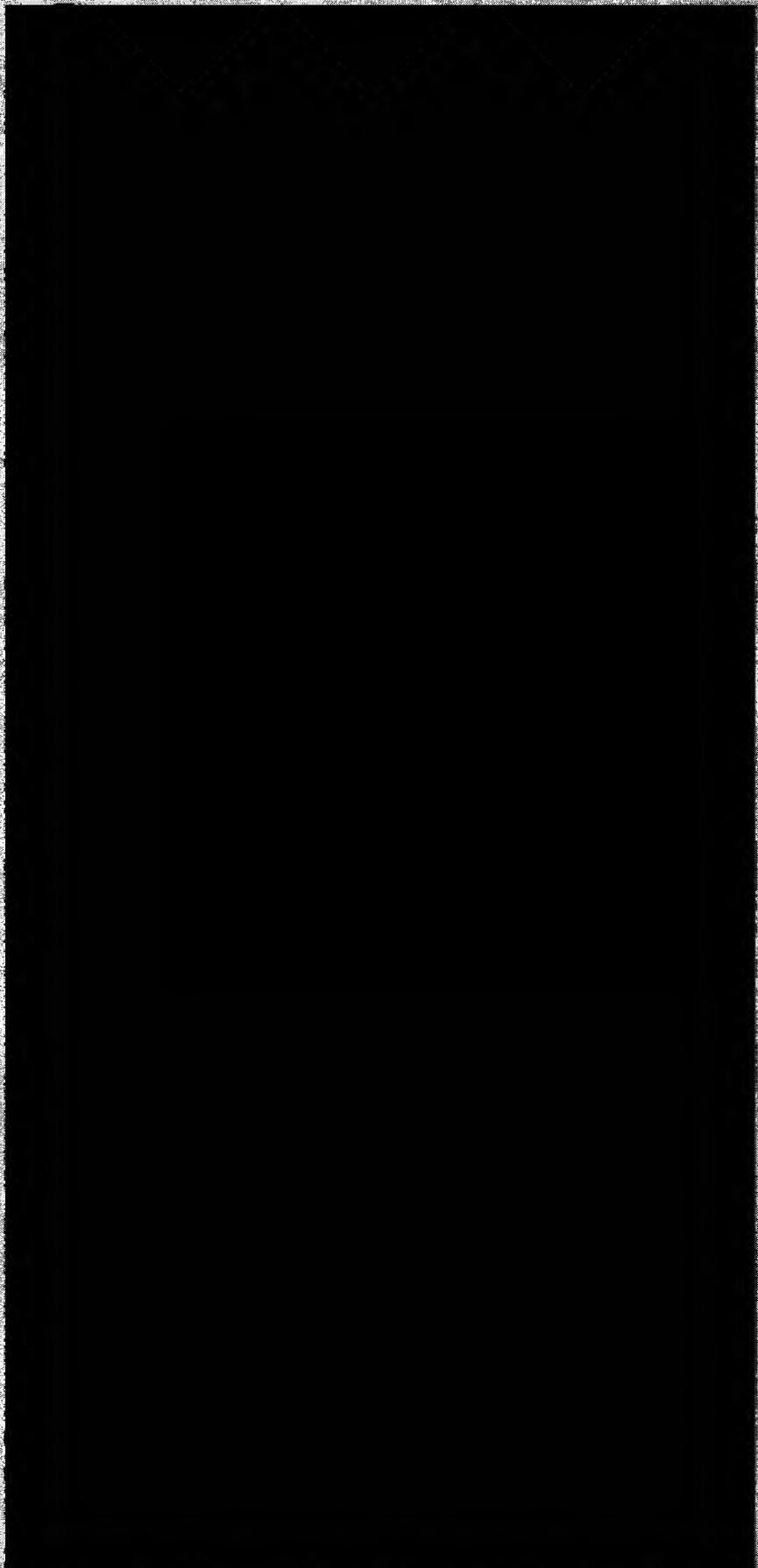
Driver's Side Tendencies



Passenger Side Approach



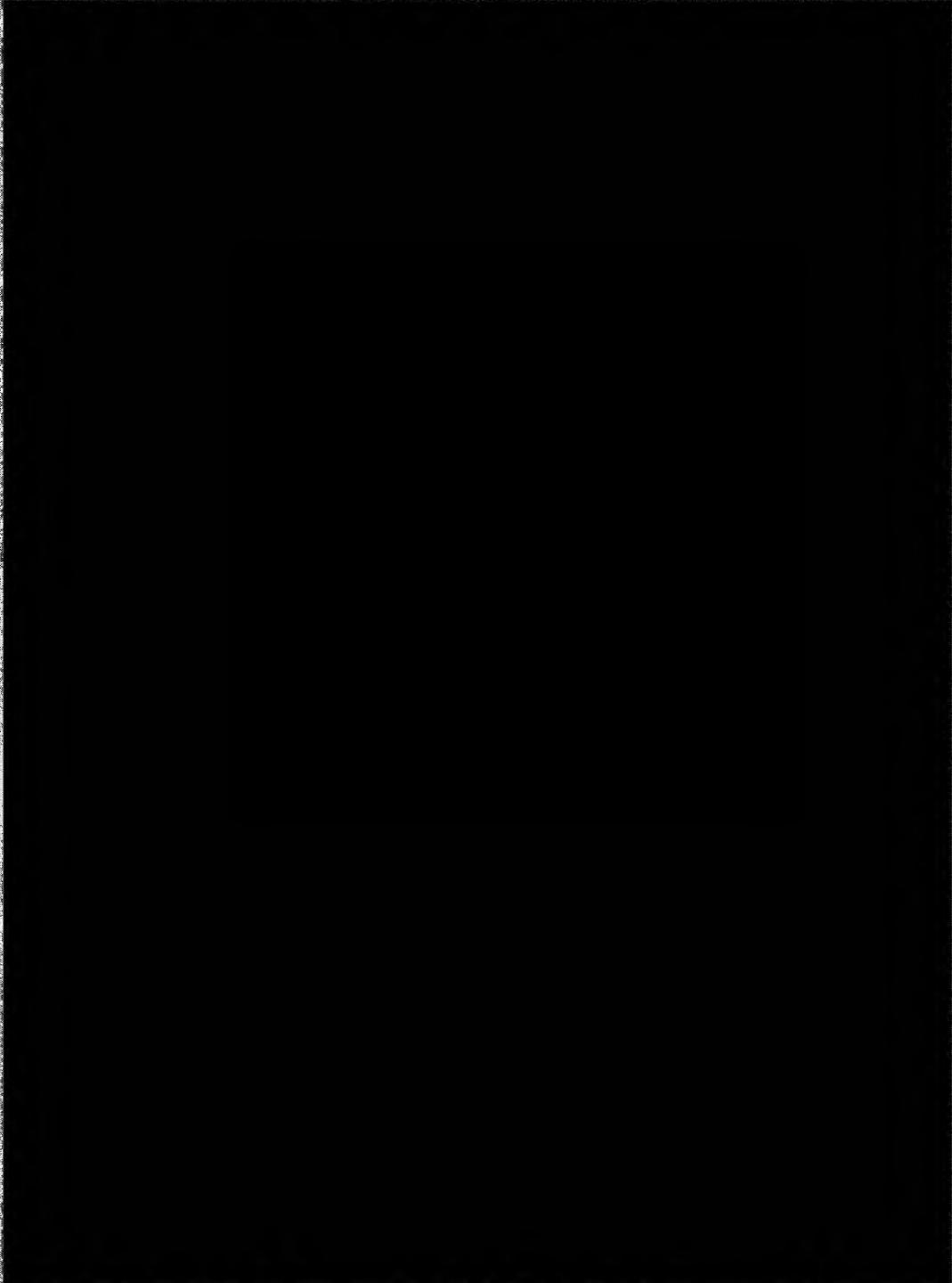
Safety Zones



Safety Zones

Safety Zones

Safety Zones



Tactical Options

- Environmental awareness is something that we all need to incorporate into our tactical thinking and assessments
- Knowing where we are will allow us to better move and escape an incoming threat such as a vehicle

CHP Incident

■ May 2, 1997

■ Black Fiero was speeding and failed to yield

■ The vehicle was stopped by a CHP officer

M[OVING]



Moving

- What is the officer's body language?
- Was this necessary?

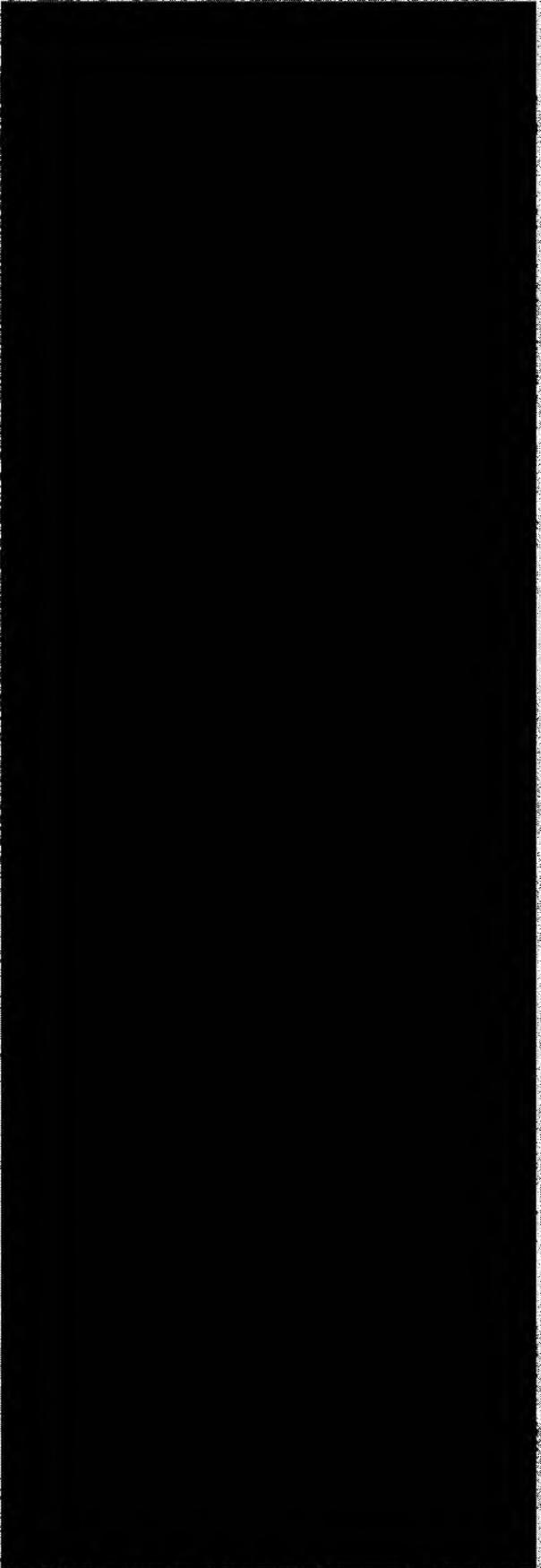
POSITIONING



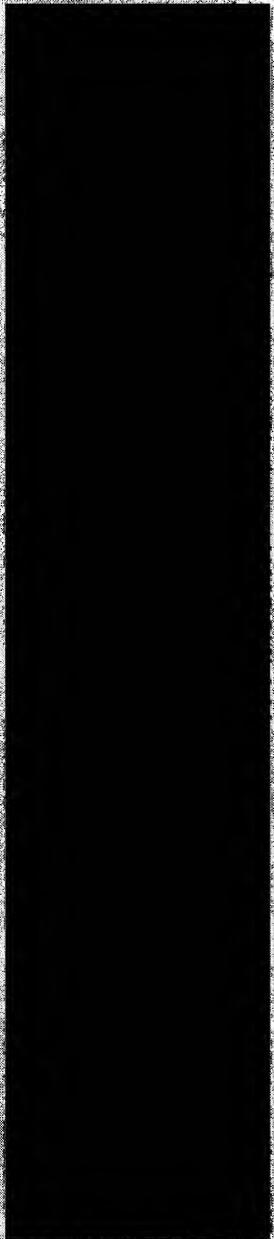
Tactical Options

What other reasonable options existed for the CHP Officer?

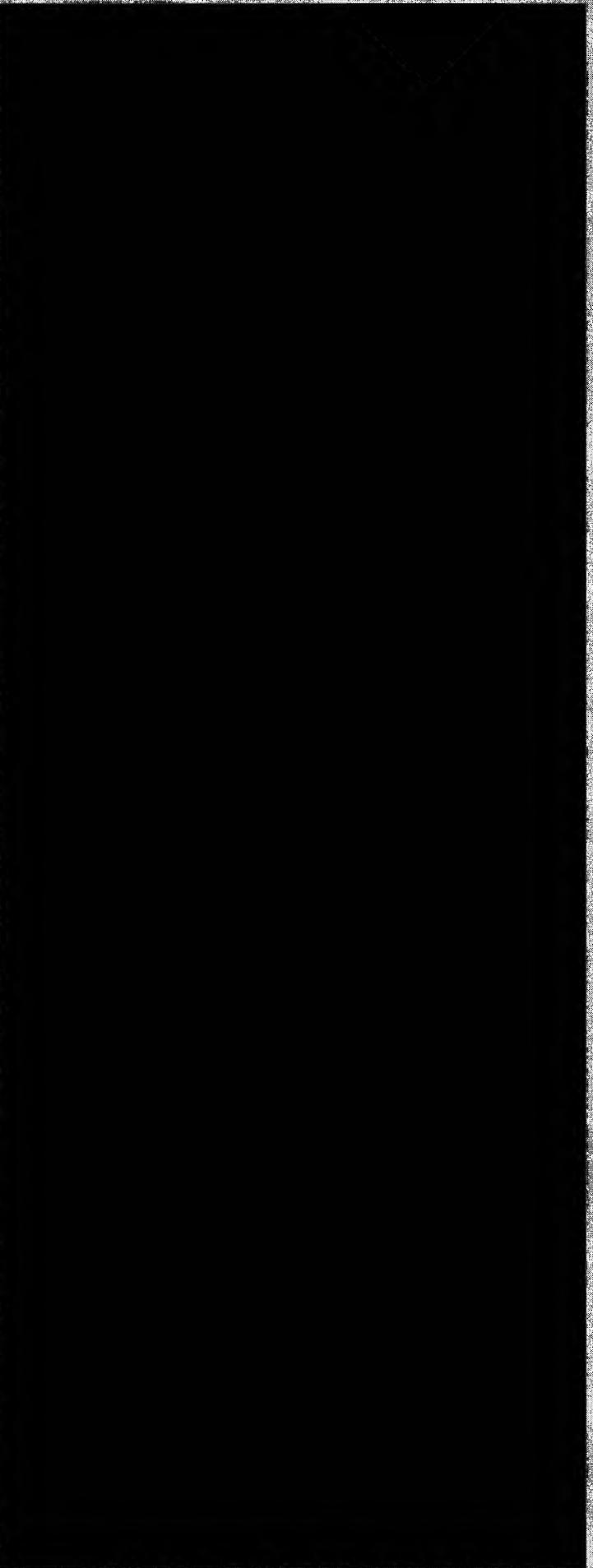
Tactical Options



Tactical Options



Tactical Disengagement



What if force is used?

Tactical Considerations

Environmental Factors

- By Standards
- Backstop
- Distance
- Other Officers
- Moving

Tactical Considerations

- Situation awareness is critical
- Crowded sidewalks and stairs create a dangerous environment for officers
- Officers must be able to move quickly
- Officers must be aware of their surroundings

Tactical Considerations

- Rule #4 of the Cardinal Safety rules for firearms is:
- Be aware of your target, your backstop and what is beyond
- Regardless of the exigent circumstances, you have an accountability for every shot you fire

Tactical Considerations

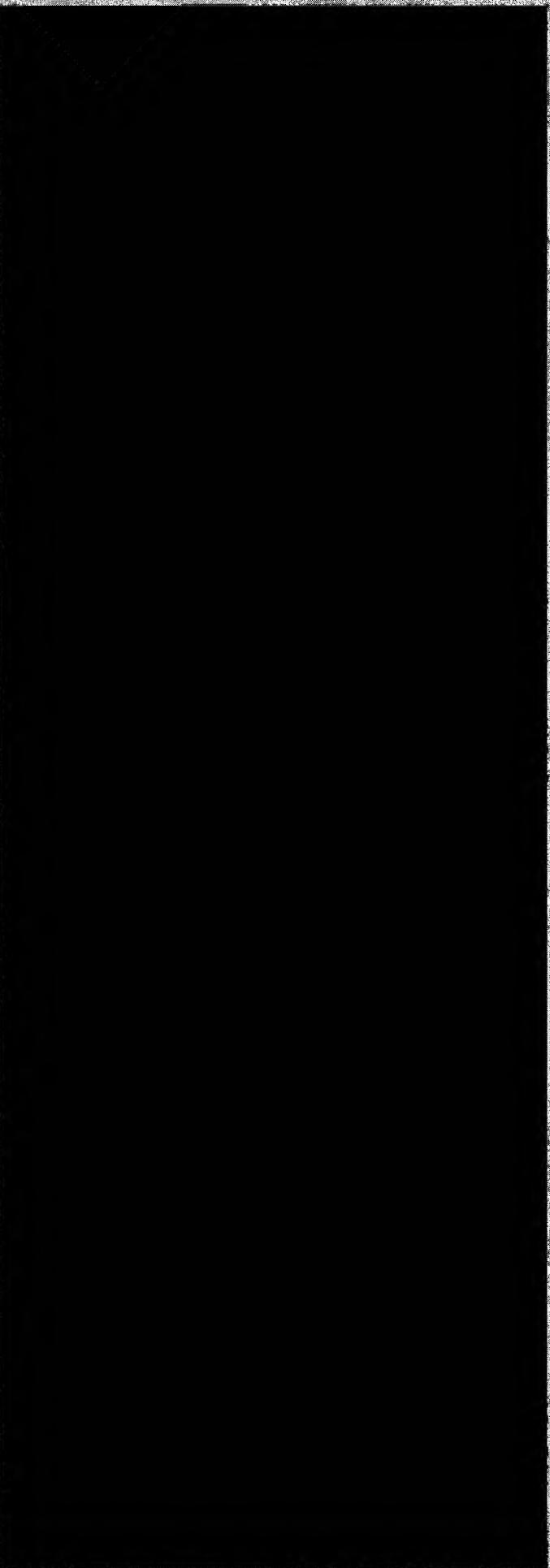
- When confronting a critical situation involving a moving vehicle remember:
 - Continue to move
 - Get some distance between you and the threat
 - Distance will give you time and options in most cases

Tactical Considerations

- In any situation, static or critical, know where other officers are
- Knowing where they are will assist you if you have to fire your weapon
- If other officers need to fire, it may give you a better chance to get to cover if you know where they are firing from

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Tactical Considerations



Tactical Considerations

■ Basic

- Windshield
- Passengers
- Movement

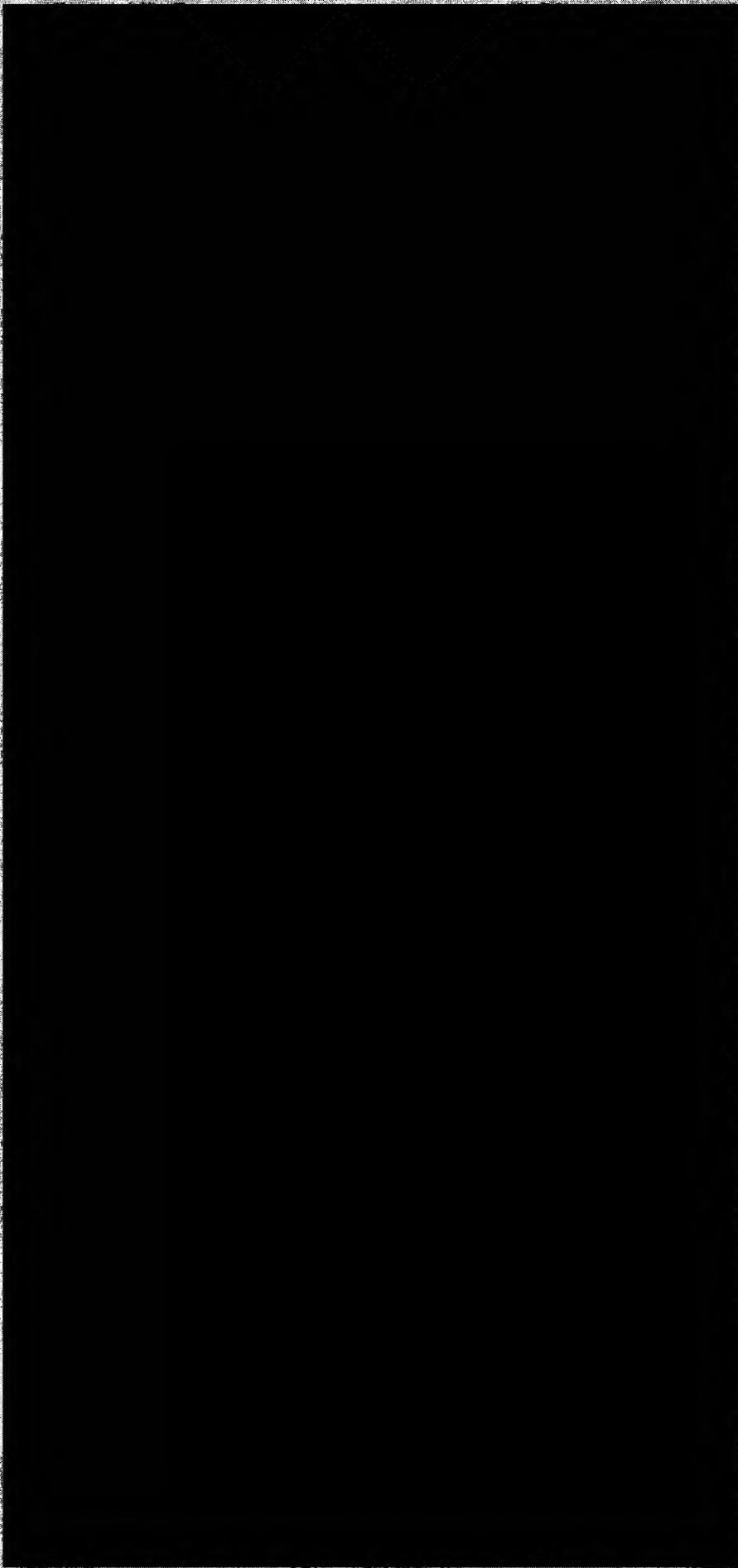
PPB Ballistics

- Federal HST 9MM
- 147 Grain Round
- Approx. 1000 fps
- Gelatin penetration 14"-16"
- Foot pounds of Energy @ muzzle 325

PPB Ballistics

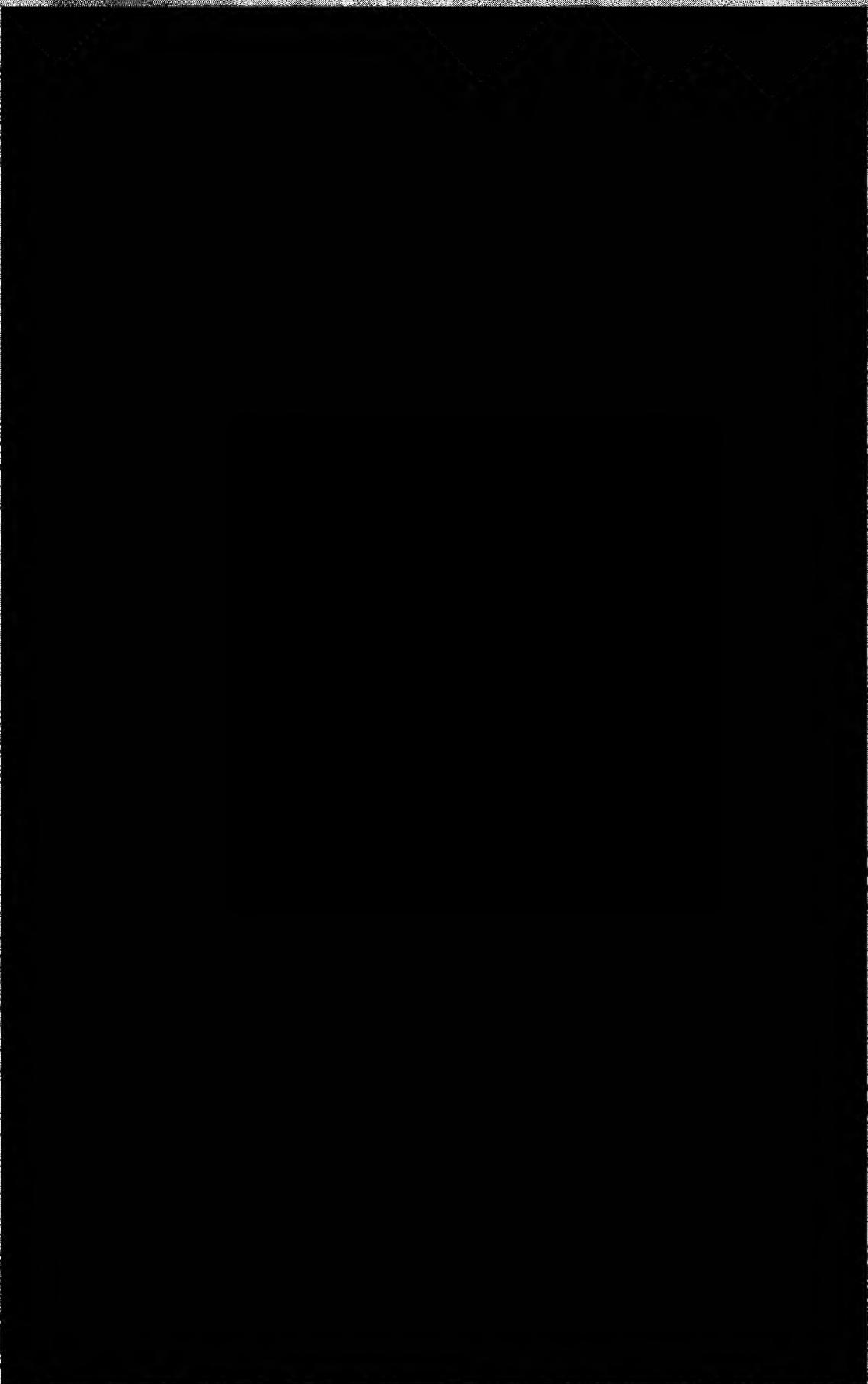
- Windshields
- The most recent tests for Windshields yielded the following data:

Tactical Considerations

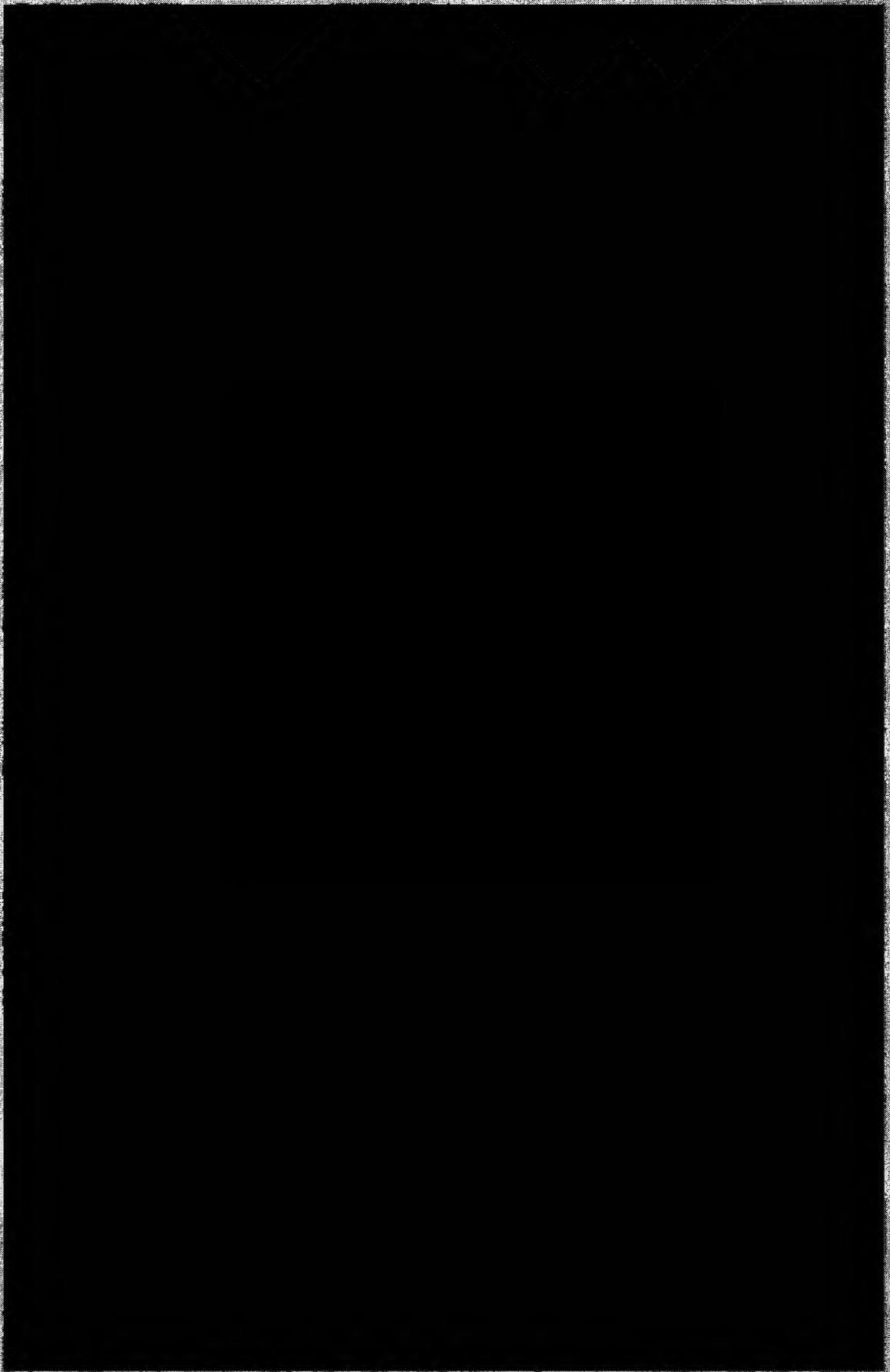


Ricochet Rounds

Ricochet Rounds

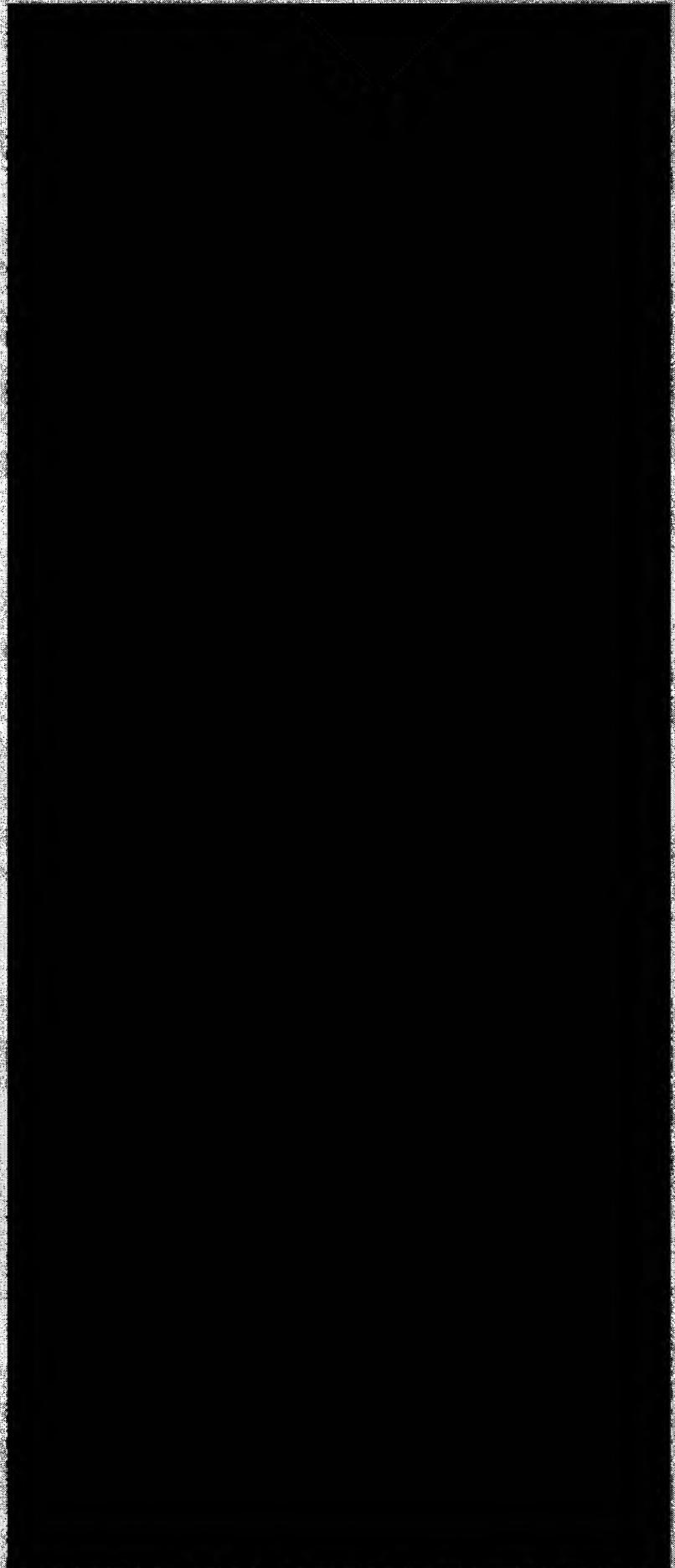


Ricochet Rounds

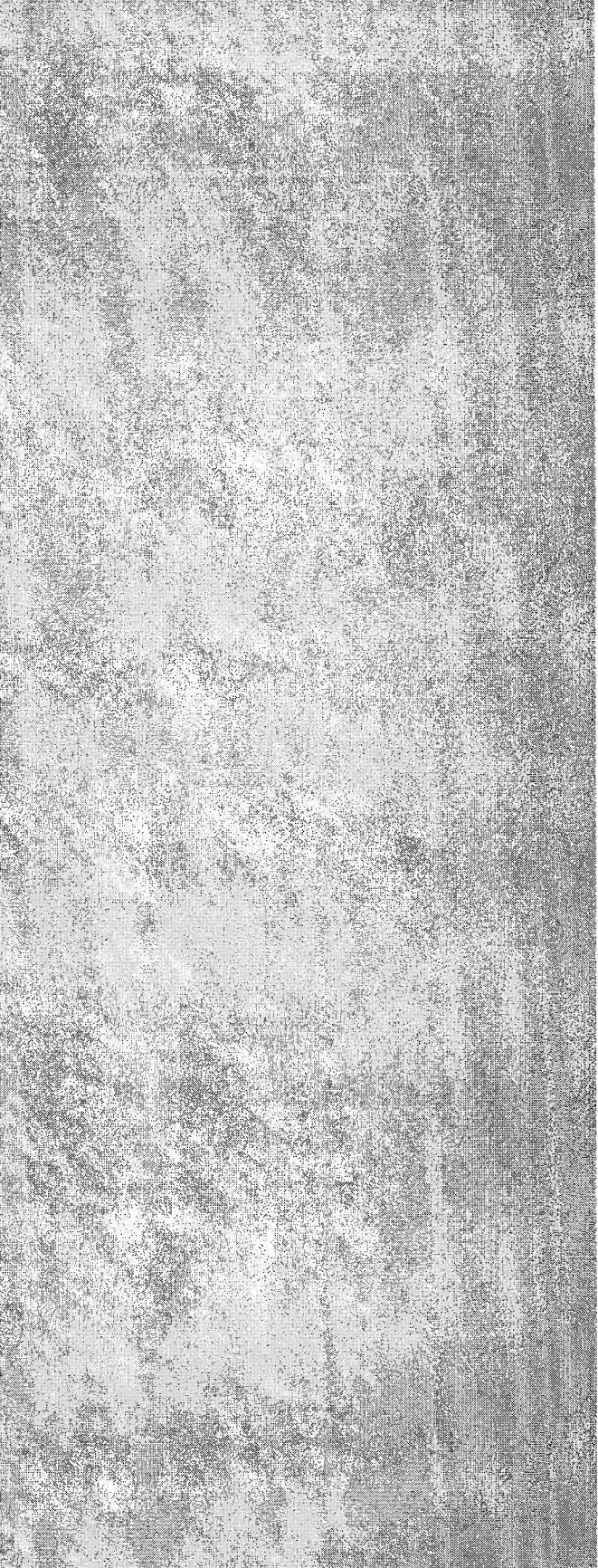
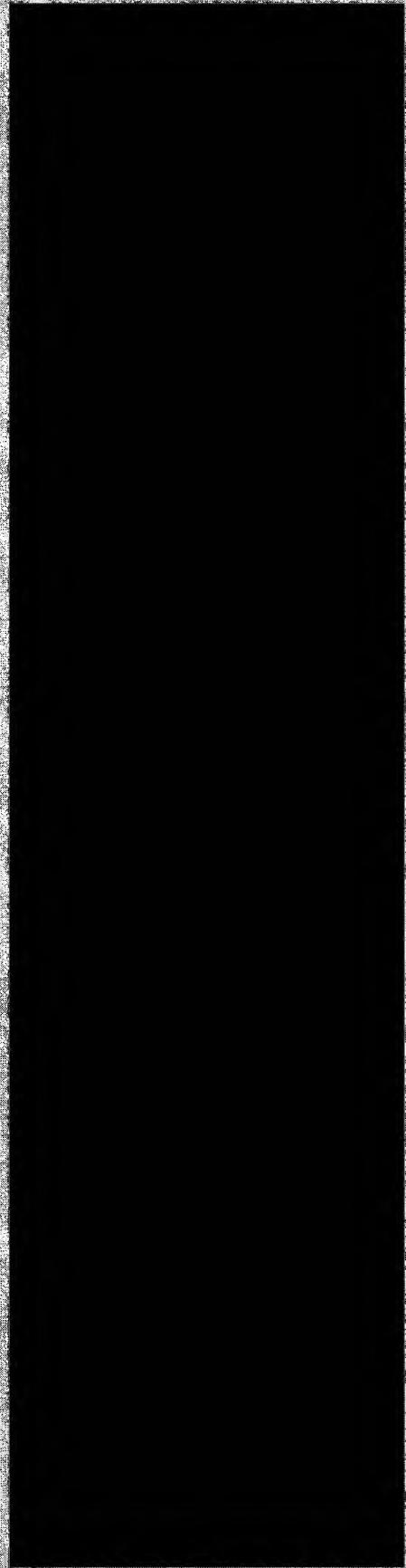


Ricochet Rounds

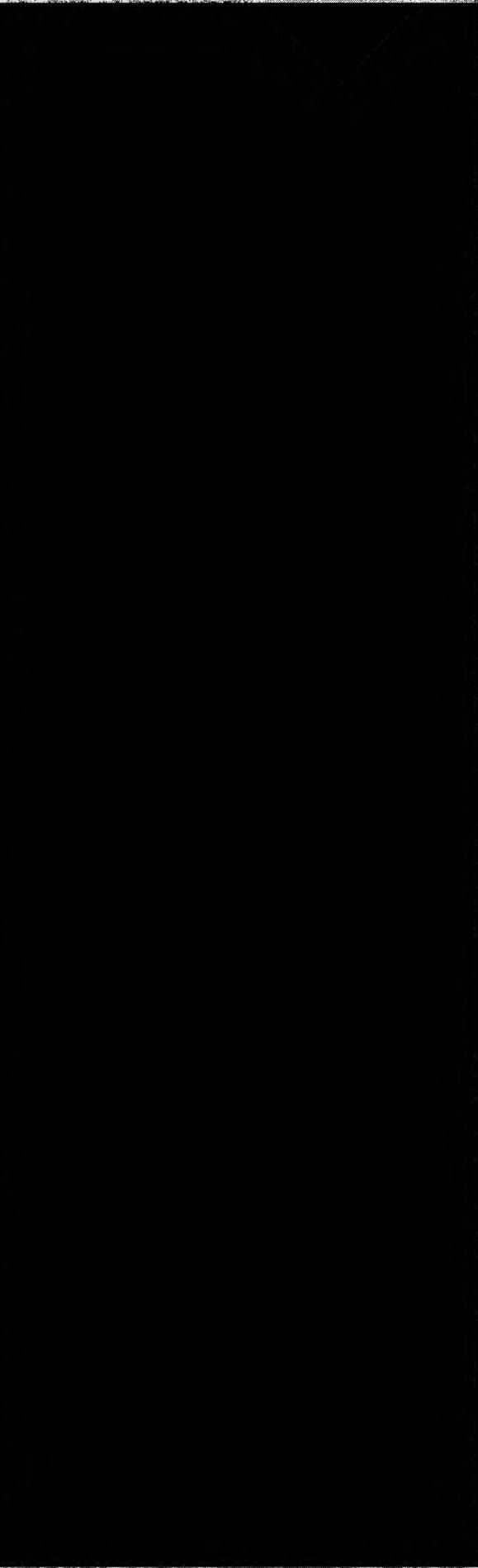
Tactical Considerations



Tactical Considerations



Tactical Considerations



Tactical Considerations

Officer Hit Ratios

Officer [H]it Raúl OS

- Standing on the range, with a non-moving target is a rich environment for marksmanship quality shooting
- Add adrenaline, stress, movement and the decision to shoot... changes our marksmanship

Officer Hit Ratios

- For years it was believed that nationally, officer hit ratios were 17% - 20%
- Recent studies have concluded that low hitting conditions, training, mindset and the number of officers involved play a critical role

Officer Hit Ratios

Study Findings

- When one officer fired
 - 51% hit ratio
 - 23% hit ratio
 - 9% hit ratio
- With two officers
- With three or more officers

Officer Hit Ratios

- The multiple officer shooting often occurred when the suspect was using a shoulder fire weapon which increased the distance the officers were from the threat.

Officer [H][I][J] OS

Officer Factors include:

- Suspicion/vehicle movement
- Officer movement
- Environment
- Lighting

Stopping Power

- The U.S. Military experimented with stopping vehicles by shooting them with an M60 machine gun and various other guns in an effort to determine if facilities could be protected from car/truck bomb attacks.



■ If an M50 will not
"stop" a vehicle will
anything else
typically have
access to be more
effective?



Summary

- The cornerstone of use of force training should be threat assessment
- Proper threat assessment will enhance the application of the disengagement theory